WHAT IS CLAIMED IS:

1. A method for treating a victim of possible cardiac arrest, usually due to a heart attack, by applying chest compressions to the victim and by monitoring of ECG (electrocardiogram) signals of the victim by a control of an AED (automatic external defibrillator) to determine whether or not to operate the AED to deliver a defibrillator shock to the victim, comprising:

continuing to apply chest compressions to the victim while generating corrupted ECG signals that are corrupted by chest compression artifacts;

analyzing, by the control of the AED, the corrupted ECG signals that are corrupted by chest compression artifacts to determine whether or not to operate the AED to deliver a defibrillating shock.

2. The method described in claim 1 wherein:

said step of analyzing the corrupted ECG signals includes analyzing intermediate portions of the ECG signal that lie between successive chest compression artifacts but not portions of the ECG signals that include the chest compression artifacts.

3. The method described in claim 2 wherein:

said step of analyzing the corrupted ECG signals includes identifying QRS complexes in short periods between successive chest compression artifacts, including detecting two successive signal portions in said short periods of the ECG signal that are of opposite large slopes and large changes in amplitudes.

4. The method described in claim 3 wherein:

said large changes in amplitudes are at least 10 percent of the chest compression artifacts.

5. The method described in claim 1 wherein:

said step of analyzing the corrupted ECG signals includes producing first calculations representing an autocorrelation of each of a plurality of spike regions of a transform of the ECG signal and producing second calculations representing a crosscorrelation of said plurality of spike regions, and calculating an integral of the magnitude of differences between said crosscorrelation and said autocorrelations, and determining whether or not to operate the AED to deliver a defibrillating shock based on the amplitudes of said integrals.

6. An automatic defibrillation control which analyzes ECG signals to indicate whether or not the ECG signals are from a beating heart with perfusion rhythm, comprising:

computer circuit means that receives ECG signals that contain chest compression artifacts, that recognizes the chest compression artifacts, and that analyzes portions of the ECG signals that lie between the chest compression artifacts.

7. The control described in claim 6 wherein:

said computer circuit means is constructed to detect QRS complexes by detecting large slopes in ECG signals along large amplitudes of voltage change.

8. The control described in claim 7 wherein:

said computer circuit is constructed to detect slopes on the order of at least

30 millivolts per second between points that vary in amplitude by an amount that is at least about 10% of the variations in amplitude caused by the compression artifacts.

9. The control described in claim 7 wherein said chest compression artifacts are uniformly spaced in time, and wherein:

said computer circuit means is constructed to confirm the presence of QRS complexes by the presence of detected QRS complexes between successive pairs of compression artifacts, where the phase shift between compression artifacts and QRS complexes changes regularly.

10. The control described in claim 9 wherein:

said computer circuit means is constructed to confirm the presence of QRS complexes by detecting that any QRS complexes regularly occur between chest compression artifacts and can be detected, that any QRS complexes then regularly occur almost simultaneously with chest compression artifacts and cannot be detected, and that any QRS complexes then again occur regularly between chest compression artifacts and can be detected.

11. An automatic defibrillation control which analyzes ECG signals to indicate whether or not the ECG signals are from a beating heart with perfusion rhythm, comprising:

computer circuit means constructed to generate integral signals that represent a computation of a transform of the ECG signal, a computation of an autocorrelation of a group of spike regions of the transform, a computation of crosscorrelations of the spike regions of the group, and a computation of integrals

of the differences between each crosscorrelation and said autocorrelation;

said computer circuit means is constructed to indicate that the ECG signals are from a beating heart with perfusion rhythm when said integral signals are less than a predetermined value.